historical change in the meaning of drug use amongst adolescents. They proposed that such use may no longer represent a deviant behavior in response to the experience of self-rejection (Kaplan, 1978). Jessor and Jessor (1977) have also commented that the social and personal meanings attached to behaviors such as drug use may depend in important ways on the time period during which the observations were made. Kovach and Glickman (1986) go so far as to suggest that drug use has become a normal, predictable form of behavior that accompanies adolescent development.

The psychological and social pressures for teenagers to use one drug are probably similar to the pressures to use others (Hundleby, et al. 1982). For example, Needle et al. (1986) reported older siblings to be a common source of drugs in general. Frequency of use of a variety of substances was predicted by older sibling and peer substance use, each after controlling for the other. Fawzy, Coombs, and Gerber (1983) found that 85% of mothers who smoked more than a pack a day had substance-using children -- defined as one who during the preceding month used alcohol or illegal drugs for the express purpose of altering mood. Similarly Marcos, Bahr, and Johnson (1986) determined that across four drug types (tobacco, alcohol, amphetamines and depressants, and marijuana) drug-using friends constituted the predominant influence on adolescent drug use.

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It is a fact that individuals who use one drug are very likely to use another. Kandel (1980) has described at least four distinct developmental stages in adolescent drug involvement: (1) beer or wine; (2) cigarettes and/or hard liquor; (3) marijuana; and (4) other illicit drugs. The identification of developmental stages of general drug use has important methodological implications for studying the factors which may predict or result from the use of a particular drug. "Whereas most studies compare youths within a total population on the basis of their use or nonuse of a particular substance, a different strategy is warranted: Each stage represents a cumulative pattern of drug use and generally contains fewer adolescents than the preceding stage in the sequence. Comparisons should thus be made between those members at a certain stage who have and those who have not already used the drug(s) at the preceding stage(s). Unless this is done, the attributes that appear to identify a particular stage of drug use may actually characterize involvement in drugs at the preceding stage..." (Kandel, 1980, p. 258). If beer or wine usage is a general precursor to cigarette smoking, large scale longitudinal studies which compare drinking and smoking patterns would provide valuable information on the role of alcohol use in smoking initiation. Kandel and Logan 's (1984) data showed that the initiation rates for alcohol were consistently higher than those for cigarettes from age 7 through to age 23. Almost 20% of the

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cohort reported having used alcohol by age 10, and over 50% by age 14. Newcomb and Bentler (1986) point out that these data, because they were collected retrospectively, are vulnerable to distortion because of possible recall biases. Other studies, however, have presented data consistent with the notion that alcohol use may precede tobacco experimentation (Coombs, Fawzy, & Gerber, 1986; Graham, et al., 1991; Keyes & Block, 1984; McNeill, et al., 1989; Newcomb, Maddahian, Skager, & Bentler, 1987; Sarvela & McClendon, 1983). Istvan and Matarazzo (1984) reviewed more than two dozen studies concerning the interrelationship between tobacco and alcohol, and concluded that alcohol and tobacco consumption could be linked by a common set of factors. In a sample of 27,335 public school students, Welte and Barnes (1987) noted an intimate association between smoking and alcohol use, drug use, and deviant behavior in general.

It might be argued that notions of coping and stress reduction have little to do with smoking initiation, since the user would have had to experience stimulation and/or relaxation in order to be motivated to smoke for those reasons. Leventhal and Cleary (1980), for example, discussed the regulation of internal emotional states in the context of maintenance -- their fourth stage of smoking. It is possible, however, that youthful experimenters may have already experienced the affective effects of alcohol before trying

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cigarettes. Consequently, they expect a comparable constellation of results from smoking, even though they have not yet used cigarettes.

Eiser (1985) argues that smoking 'expectancies' can be acquired from peers, often before and without the actual behavior occurring. This would explain, in part, Wills' (1985) observation that "...initiation of substances in early adolescence is not simply a matter of unwilling adolescents being pressured into substance use by peers. Rather, ...some adolescents are attracted to smoking situations and enter such situations with the full knowledge that they will (and will want to) have an opportunity to smoke" (p. 91). Eiser, Walsh, and Eiser (1986) proposed that anticipatory beliefs may play an important role in smoking acquisition. They found that 11-year-olds showed a good appreciation of the fact that smokers may smoke to alleviate a negative mood, as well as to obtain positive effects, even though the children in their sample had not actually experienced any cigarette-induced mood changes for themselves.

Most of the longitudinal studies on smoking reviewed in this and previous sections have compared a group of youths who subsequently take up smoking with all others who do not. A stage notion of drug use would require that the contrast groups be confined to those actually at risk for smoking initiation. Although there is no agreed-upon model stipulating

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the nature and sequence of drug involvement at different developmental periods (Kandel, 1975; Newcomb & Bentler, 1986), it is conceivable that if longitudinal analyses of smoking onset were restricted to adolescents who had already had some experience with alcohol, the profile of youths at risk to smoke would look different from the currently available picture.

Overview

On the basis of their study of 6,810 Massachusetts highschool students, Salber, Freeman, and Abelin (1968) concluded that "... understanding may be limited by the adoption of the position that the presence of a given behavior can be explained as the result of traits which predispose or motivate an individual to engage in the behavior" (p. 136). They recommended longitudinal studies, conducted in a developmental context, and utilizing a dynamic approach to the interplay of individual and sociological variables. Evans et al. (1979) lamented that "...no conceptual framework or organized line of research has systematically guided the research related to individual characteristics in the initiation of smoking, and the literature reflects the patchwork quality of the existing knowledge" (p. 16).

Conceptual guidelines are now available (Flay et al., 1983; Leventhal & Cleary, 1980), and longitudinal studies are

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more abundant. It is clear however, that the etiology of smoking is complex. There are numerous instances in the literature of involved interactions between individual characteristics and social influences. Blount and Dembo (1984), for example, investigated the impact of neighborhood values on tobacco, alcohol, and marijuana use. For tobacco and alcohol, peer use was predictive of personal use, regardless of how 'tough' or drug involved the neighborhood was perceived to be. For marijuana, however, the effects of peer influence were dependent on the perceived toughness of the neighborhood. Brunswick and Messeri (1984b) found a clear correlation between cigarette smoking and hard drug use in their sample of urban black adolescents, however the factors predicting smoking onset in males did not predict their hard drug use. For females, only 2 of 17 predictor variables were implicated in both smoking onset and drug use (i.e., lack of family involvement and absence of health concerns).

The complexity of these sorts of findings, in conjunction with the methodological concerns raised in the previous section, make it clear that much remains to be learned about the onset and developmental history leading to regular smoking. Limitations of the currently available knowledge notwithstanding, at least some of the important forces which contribute to the establishment of smoking during adolescence have been delineated.

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Parental and sibling smoking may "prepare" or predispose children to smoke long before the behavior is actually attempted. Baric and Fisher (1979) reported that it is not unusual for parents to engage fairly young children in activities such as handing parents cigarettes or bringing lighters or ashtrays to smoking adults. Parents serve as powerful models. If one or both parents smoke, modeling processes may have been operating for as long as a decade before any initiation occurs. A smoking sibling may constitute a different but uniquely persuasive sort of model because siblings are not likely to be perceived as adults. Older sisters seem to exert a particularly potent influence on their younger female siblings. Family smoking patterns form part of an immediate and intimate social milieu in which accepting attitudes are more likely to develop, and in which the social functions of smoking may be more salient. Parental smoking remains a strong predictor of smoking onset from grade six through highschool, and would appear to override any potential effect that verbal disapproval of smoking might have. A family setting in which smoking is frequent also provides the materials for initial experimentation.

While family influences may be important in creating attitudes accepting of, if not favorable toward smoking, peers appear to play a dominant role in both initiation and early maintenance. Not only does the presence of peer smoking models precede smoking onset, youths who continue to smoke

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tend to have a peer group in which smoking is prevalent, relative to 'triers' (i.e., those in the initial stages of experimentation). Smoking is a social activity for teenagers. Friends are very likely to be present on the first smoking occasion, and friends are often reported to be the source of cigarettes. Adolescent smokers frequently report having best friends and/or boyfriends/girlfriends who smoke. Hyllienmark (1986) has speculated that the cigarette may come to be perceived by some adolescents as a sort of symbol of group membership -- providing psychological comfort by denoting belongingness even when the individual is alone.

The most clearly documented individual characteristic predictive of smoking onset is deviance proneness. This feature is reflected in a variety of measures including lower achievement motivation, poorer academic performance, rebelliousness towards authority, a higher tolerance for deviant behavior in general, and a degree of alienation from traditional institutions. The younger the child, the more deviant (statistically) is the act of smoking. Thus, characteristics related to deviance proneness should predict smoking onset more strongly for younger children, compared to older ones. Chassin et al.'s (1984) data are consistent with this notion. Chassin (1984) has noted that amongst adolescents, unconventionality precedes substance use in general. She concluded that the more 'normative' the drug is within a

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particular social subculture, the less likely it is that rebelliousness will predict its use. In addition to a relatively unconventional outlook, youths at risk to smoke appear to have a more external control orientation. Extraversion may also be a predictor variable, although few studies have demonstrated the relationship within a longitudinal design.

Knowledge and beliefs about smoking, self-images, images of smokers, and reported intentions to smoke have a more uncertain status with respect to predictive power. While these factors are all undoubtedly related in some way to smoking behavior, whether they are causally linked to smoking onset remains to be seen.

A relatively recent line of inquiry views substance use in the context of coping mechanisms which are used to deal with stressful life circumstances. "From this perspective, persons are viewed as active agents who try to cope with the stressors and temptations they experience, rather than reacting passively to biological impulses or psychological temptations" (Shiffman & Wills, 1985, p. xxi). Hadaway et al. (1986) subscribe to a similar approach. Dembo, Blount, Schmeidler, and Burgos (1986) studied various risk factors associated with alcohol and marijuana use. They recommended viewing adolescents as "motivated actors" -- directing their own actions in a bid to achieve self-defined goals. Such a conception differs dramatically from a position which characterizes youths as

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relatively helpless pawns influenced by strong outside forces. While the utility of this approach to the understanding of smoking onset has not yet been demonstrated, it is a promising development. Poor school performance, family conflict, expectations of positive physical effects, and various other factors may combine to make substance use an attractive option for some adolescents. Furthermore, there is some evidence that experience with alcohol may be an important precursor to smoking experimentation.

Flay et al. (1983) pointed out that the process of becoming a smoker is stochastic. At each successive stage in the process (i.e., preparation, initiation, experimentation, etc.), the probability that a youth will proceed to the next stage is always less than one. There are always some youths who are "at risk" for various reasons, but who do not go on to the next stage of development. A potentially fruitful line of inquiry might entail a closer scrutiny of these subgroups. It is possible that these individuals possess some personal characteristics (not tapped by the conventional personality tests) which somehow 'protect' them from the risk factors.

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MEDIA EFFECTS

The Psychology of Advertising

The study of advertising effects -- especially effects as specific as those being considered here -- is a component of mass media research. Howitt (1982) described three major approaches to mass communications research: the effects model, the uses and gratifications model, and the cultural ratification model. The effects model is the most obvious perspective from which to investigate advertising, since it "...quite clearly ... reflects precisely the sort of concerns about the mass media which politicians and public alike seem to want to be dealt with" (Howitt, 1982, p. 7).

Basically, the effects model addresses the issue of whether particular media events have particular audience effects. There are however, some implicit assumptions in this approach that are problematic, one being that the media act directly on the audience. Howitt likens this conception to a 'hypodermic' model, wherein the media inject the audience with a dose of persuasive communication. The effects are assumed to be homogeneous, regardless of audience characteristics. Such an approach has difficulty sorting out media effects from those due to various other social forces. Also, the model

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typically fails to address the psychological mechanisms supposedly operating, and fails to associate these mechanisms with conceptions of receiver comprehension, or in the case of children, to developmental changes.

These conceptual weaknesses are sometimes evident in the arguments of authors who implicate cigarette advertising in the onset of smoking in adolescents. Critics often make vague allusions to "conditioning", and further imply that images or messages which purportedly reside in advertisements are inexorably and automatically deposited into the viewer's mind. For example, Wong-McCarthy and Gritz (1982) claim that there are numerous reasons for expecting that cigarette advertising can influence teenagers to begin smoking. One reason is that the models in the ads are wearing clothes suitable only for adolescents. Another is that the ads imply that there are social benefits from smoking. Notwithstanding the validity of these claims, how and why advertising's themes are perceived, apprehended and internalized by the viewer are not specified. Atkin, Hocking, and Block (1984) have made equally casual assumptions about conditioning and social learning theory in their attempt to link teenage beer drinking with television viewing. The authors cite Leventhal (1964) as arguing that "...young people are conditioned to accept alcohol advertising through jingles, sports associations, and identification with characters who display breeding and discriminating taste" (Atkin

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et al., 1984, p. 159). In fact, Leventhal did not argue this. The proposition was simply presented by him as an example of an undocumented claim which is often made by leaders of the anti-alcohol movement. There is no evidence of its validity, nor did Leventhal claim that there was.

Criticisms based on content analyses usually involve "...the fundamental error of simply equating the message propagated with the effect achieved..." (Bergler, 1981, p. 67). Identifying the features of advertisements is not too difficult, but the psychological processes of interpretation and assimilation are not advanced by this initial descriptive step. Some authors assume that the identification of a theme in advertisements is all that is required to demonstrate the advertisements' effects. (Fine, 1974; Myers, 1981; Warner, 1985). Such an approach cannot explain any effects, for it is neither dynamic, nor interactionist. A model of advertising effects which posits some sort of direct stimulus-response relationship between advertising and consumption does not do justice to the complexity of human motivation, nor, in the case of tobacco, to the psychology of smoking. At a basic minimum, such an approach cannot explain why there are nonsmokers.

The conceptual weaknesses of the effects model are also reflected in one of the dominant paradigms in consumer behavior which pertains specifically to advertising effects. The classical psychological explanation for advertising's effects has

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typically involved some sort of hierarchy of effects (HOA) model (Lavidge & Steiner, 1961). Such a model assumes a predictable, one-way relationship between various stages in a persuasion process which begins with attention to the advertisement and culminates in purchasing action. Thus advertising is assumed to create various pre-purchase mental states, and moves consumers through successive steps, the last of which is the actual act of buying the product. Such explanations are intuitively appealing. They make "common sense". Unfortunately, there is no empirical support for such a model (Leiss, Kline & Jhally, 1986; Murray, 1986; Palda, 1966).

Notwithstanding weak support, HOA models never were particularly well-articulated psychological models. It is one thing to propose that viewing or hearing an advertisement "creates brand awareness" or "establishes liking". It is quite another to specify just how or why the particular substance of the advertisement accomplishes these effects. Through what psychological mechanism or process do advertising's messages influence the receiver -- if they do influence the receiver? This is the sort of question that a true model of consumer behavior needs to address. So far, there has been only cursory consideration of such issues (Cobb & Hoyer, 1985). HOA models do not explain advertising effects -- rather they postulate some hopes, and indicate how some potential sorts of impact, which are intermediate between no effects at all and actual

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purchasing, might be measured. Because HOA models lend themselves to empirical study, they have had substantial impact on both practice and theory. The evidence shows that advertising's effect on consumer behavior is generally weak -- both absolutely and relative to other marketing considerations, not to mention other sources of information and influence (Driver & Foxall, 1984).

There are, of course, alternatives to HOA models for researching advertising effects, but any attempt to attribute significant influence to advertising per se has trouble explaining why so many new brands and new products fail in the market place -- in spite of heavy and sustained advertising campaigns. There is ample documentation that advertising is neither necessary nor sufficient for sales (Schudson, 1984). If "technology" is taken to mean the systematic application of psychological principles based on a serious understanding of consumer behavior, then there is no "technology" of advertising. Advertising practices are determined more by relatively arbitrary and capricious assumptions about what might work, than by any substantive knowledge of what does work. Despite all their efforts, ad agency workers are pretty much in the dark about the role their productions play in moving goods (Ramond, 1979). According to Schudson (1984), neither the client nor the agency ever know much about an ad's impact on sales or profits, in either the short term or the long term.

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Extravagant claims notwithstanding (e.g., Myers, 1984) there is not now, nor has there ever been any coherent psychology of consumer behavior that guides advertising methods. This is as true for tobacco ads as it is for any other product. The sheer volume of advertising expenditures for tobacco is large, and is often cited as prima facie evidence that advertising plays a causal role in initiating the habit. If advertising expenses are expressed as a proportion of sales however, cigarette advertising expenses are not atypical, compared to other products which sell widely, and for which market share competition is intense. Half a percentage point of the market share constitutes a commercial success for cigarettes. In the particular case of tobacco, there is evidence that advertising bans have had little impact on consumption. If product use is determined primarily by social influences (rather than commercial ones) then the futility of advertising bans is understandable (Waterson, 1984). As the preceding sections of this report have demonstrated, smoking has a complicated ontogeny.

Smoking and Advertising

Perhaps the most distinguishing feature of the research on the role of the media in smoking initiation is its scarcity. Flay et al. (1983) and Kozlowski (1979) acknowledge

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that there is no persuasive evidence linking advertising to smoking onset or maintenance. Nevertheless, prevention programs often include a component intended to train youths to resist the (presumed) effects of advertising (Evans et al., 1978; Killen, 1985; Wills, 1985). Such programs are mounted even though the supposed media effects have not been documented, nor are the prevention programs designed to yield evidence on which of their several components is responsible for the obtained results, if and when they occur.

Before reviewing the studies which have attempted to investigate a relationship between advertising and smoking, a comment on methodology is in order. Most researchers have addressed the question by soliciting from their respondents a verbal assessment of the degree to which advertising influenced their behavior. Such an approach assumes that people have relatively direct introspective access to internal motivational states. This assumption is a dubious one (Nisbett & Wilson, 1977). Bergler (1981), after reviewing the issue of smoking and advertising, concluded that verbal reports "...are strictly speaking quite worthless as evidence " (p. 88). "Worthless" is perhaps too strong a judgment, but even if one were to grant high validity to introspective accounts, the picture which emerges with respect to advertising's effects does not indicate that ads wield much influence.

Levitt and Edwards (1970) compared smokers

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and nonsmokers on their attitudes towards television cigarette commercials, and on various other variables. Multivariate analysis demonstrated that attitudes toward commercials were not predictive of smoking status. The authors concluded that a commercial ban would not affect youthful smoking. Ward (1971) queried 1,094 adolescents as to the "best" and "worst" commercials on television. Under "worst TV advertising", cigarettes was the single most frequently mentioned category. Mettlin (1973) found no relation between smoking rates of undergraduates and their self-reported frequency of exposure to media cigarette ads.

Fishbein (1977), commenting on the Ward (1971) and Levitt and Edwards (1970) studies, argued that an ad does not have to be liked to be effective. As was pointed out above, whether or not it was liked is probably irrelevant to any actual impact. In his review of potential principles of advertising communication, Ramond (1979) found no consistent relationship between whether an ad was liked, and its subsequent recall; nor was liking related to purchasing. Largely on the basis of an incomplete assessment of econometric studies, Fishbein (1977) also concluded that if an advertisement can influence brand loyalty, it can also initiate consumption.

Econometrically speaking, the proposal that advertising initiates consumption is an empirical question. If consumption were a direct result of advertising, the amount of

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cigarette advertising should be linked to the aggregate consumption of cigarettes. While a detailed review of econometric modeling is beyond the scope of this paper, the evidence of advertising's impact on consumption appears to be, at best, equivocal. Chetwynd, Coope, Brodie, and Wells (1988) reported a significant impact of advertising on aggregate demand for cigarettes in New Zealand (see also Chetwynd, Brodie, & Harrison, 1989; Harrison, Chetwynd, & Brodie, 1989). Their conclusions however, have been challenged (Boddewyn, 1989; Jackson & Ekelund, 1989), and the controversy continues (see also Chapman, 1989; Garrison, 1987; Johnson, 1986; 1988; Joossens, 1989; Tye, Warner, & Glantz, 1987). Smith (1989) reported the results of an investigation of the relationship between smoking initiation and advertising in 15 countries that varied in their restrictions on tobacco advertising. Advertising was a poor predictor of both smoking onset and prevalence.

A strong case can be made that advertising is much more influential in affecting brand choice than it is in persuading someone to buy a product in the first place (Schudson, 1984). According to Abernethy and Teel (1986) "...cigarette advertising primarily affects the market share of individual brands rather than aggregate consumption" (p. 55). Similarly, Moschis (1989) concluded that "... the data are far from being clear on whether cigarette advertising creates in any way the desire to initiate smoking and maintain smoking habits among youth" (p. 57).

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Some researchers attempt to learn about advertising effects by interrogating people about their attitudes and beliefs about advertising's influences. Respondents will usually comply with a request to assess features of ads, or to estimate advertising's impact on their behavior. Whether or not their expressed opinions indicate that they were (Gordon, 1986) or were not (Spielberger, 1986) influenced by media advertisements, such reports do not provide a reliable guide to advertising's role in smoking onset. Social desirability may bias responses in one way or another. Even if they believe themselves to be victims of Madison Ave. plots, people may not be willing to acknowledge this publicly. Alternatively, one may subjectively feel totally unmoved and unaffected by any and all ads, but nevertheless assume that ads do have some impact (perhaps on other people). In the latter instance, respondents would be willing to attribute persuasive force to advertisements, but such reports reflect nothing more than popular opinion. Bergler (1981), in an extensive review of several European studies addressing smoking and advertising, concluded that the way people describe or evaluate advertising bears no relation to their own consumer behavior, and is of no value in explaining that behavior. DiFranza, Richards, and Paulman (1991) found that very young children may be quite familiar with some of the features of cigarette advertisements. It does not follow that those ads are therefore instrumental in influencing tobacco

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consumption.

Some critics who ascribe substantial influence to advertising's role in smoking onset make strong claims about advertising effects which cannot be substantiated by any empirical evidence. For example, Yankelovich et al. (1977) had young female smokers and nonsmokers describe the individuals portrayed in a sample of cigarette advertisements. More than half of the respondents perceived these persons as attractive, well-dressed, sexy, young, enjoying themselves, etc. Smokers' perceptions were similar to those of nonsmokers'. On this basis, Gritz and Brunswick (1980) concluded that "... advertisers have been successful in creating a sense of mystery, sophistication, and power around the behavior of smoking" (p. 326). Since respondents were not asked to provide judgments about "mystery, sophistication, and power", one cannot infer their presence from the obtained data. How are individuals perceived when they are portrayed in advertisements for other products? Without these additional data, Yankelovich et al.'s (1977) findings are relatively meaningless, and Gritz and Brunswick (1980) appear to have over-interpreted the data. It is not improbable that most people depicted in most ads, (regardless of the product), are perceived by most people (smokers and nonsmokers alike) to be attractive, well-dressed, healthy, etc.

In another instance, Wong-McCarthy and Gritz (1982) suggested that "...the personality traits of toughness,

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friendliness, confidence, attractiveness and enthusiasm that are popularly attributed to cigarette smokers [in advertisements] could be sufficiently alluring to persuade adolescents to adopt the smoking habit" (p. 686). The problem with this claim is that no evidence is adduced showing that such traits are attributed by adolescents to smokers in advertisements, or in "real life". The attributions in question were made by the authors of the FTC report (Myers, 1981), who looked at a collection of advertisements. No data on peoples' perceptions of the advertisements were obtained. It is difficult to reconcile the notion of advertising's "allure" with the findings reviewed in the Self-Image section (see above). Barton et al. (1982), for example, found that smoking models were rated as less healthy and less wise than nonsmoking models. Sixth-grade subjects viewed smokers as "less desirable as friends", compared to nonsmokers.

'Low Involvement' Advertising

It is possible to argue that tobacco advertising could affect consumption in the absence of any recognition of advertising's influence on the part of the consumer. This view is based on Krugman's (1965) notion of "low involvement learning", and posits that the cumulative effect of repeated exposures to ads ultimately results in a shift in the relative

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salience of attributes of the advertised item. A significant aspect of this process is that it is largely "non-cognitive" -- the viewer does not alter his or her attitudes or beliefs as a consequence of conscious deliberations. Nothing verbalizable may have changed until the purchase actually takes place.

Essentially, Krugman provided a speculative account of how advertisements might be affecting viewers in the absence of any evidence of effects in terms of attitude change or persuasion scores. He invoked the notion of latent learning to support his argument. "Some psychologists have long asserted that the effects of 'latent' learning are only or most noticeable at the point of reward. In this case, it would be at the behavioral level involved in product purchases rather than at some intervening point along the way" (p. 354).

While there is some empirical support for the notion, it is important to note that products and/or brands may be selected and purchased for reasons which have nothing to do with advertising, thus a disclaimer on the part of the consumer with respect to advertising's influence cannot be taken as evidence of "low involvement" advertising effects. The latent learning paradigm to which Krugman refers differs in at least one crucial way from the advertising domain. In the former studies, the researchers were in a position to know with complete confidence that certain prior experiences provided the opportunity for learning which subsequent rewards made

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manifest. In the realm of consumer behavior, it is often impossible to determine the extent to which the consumer was psychologically involved ("low" or otherwise) with advertising. Nevertheless, the notion of low involvement learning is sometimes invoked in an attempt to explain the effects of tobacco ads on children.

Arbogast (1986), for example, identifies classical conditioning as "...the paradigm for much image-based cigarette advertising" (p. 409). Although the components of the conditioning process are not specified, the author states that the only way in which adolescents could fail to associate tobacco ads with enjoyable experience is "...if they escaped exposure to the stimuli" (p. 110). Since the latter possibility seems remote, she proposes various regulations on the form of tobacco ads.

A study by Chapman and Fitzgerald (1982) is cited to substantiate her claim regarding advertising effects on adolescents' smoking behavior. These authors found that teenage smokers could recall and recognize more information concerning cigarette ads than could their nonsmoking peers. Various other studies have shown that young smokers may be more familiar with or knowledgeable about tobacco advertisements or some features of their contents than non smokers (Aitken & Eadie, 1990; Klitzner, Gruenwald, & Bamberger, 1991). Such findings however, do not demonstrate that advertising is an antecedent cause of smoking initiation. An

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equally plausible explanation is that smokers are more likely to notice and/or recall advertising because they smoke. As Murray (1986) has argued, it "...has been empirically established that brand awareness, attitudes towards brands and intention to buy are all related to usage: that is, a flow of causality in the opposite direction to that postulated by the hierarchy of effect concept" (p. 22).

In an attempt to overcome the inherent limitations of cross-sectional studies, Aitken, Eadie, Hastings, and Haywood (1991) interviewed children twice, with a year between interviews. Children whose intentions to smoke became stronger between interviews tended to be more aware of cigarette advertisements at the time of the first interview. Unfortunately, the investigators did not adequately distinguish between awareness of tobacco ads and awareness of advertising in general. It is possible that children who are more extraverted and/or who have a more external locus of control would also show greater sensitivity to media images in their environment. Thus the assumed causal link between tobacco advertising and smoking intentions may be artifactual. Another problem with the study is that stated intentions to smoke are poor predictor of initiation (Ary & Biglan, 1987).

Arbogast (1986) finds evidence of media influences on smoking in another study (Aitken, Leathar, & O'Hagan, 1985) -- arguably in spite of, rather than because of the findings

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presented. Aitken et al. (1985) engaged 247 children aged 10 to 16 in discussions about advertisements. Respondents were encouraged to comment on advertisements they liked or disliked and to provide the reasons for their preferences. Later, the children were shown some examples of specific advertisements and asked "What kind of person would like this advertisement?" Children rarely mentioned cigarette advertising spontaneously during the preliminary discussions, and when tobacco ads were referred to, the children's comments were negative. Likewise, under direct probing, many of the children provided derogatory remarks about either smokers or advertisers: "Background is quite good but...not cigarettes. They damage your health." -- from a ten-year old male (Aitken et al., 1985, p. 791).

The most frequent response to the question about the kind of person who would like the advertisement was "smoker" or "smokers". The authors note that it is difficult "to specify to what extent responses were determined by the particular advertisements shown or by the subjects' recollections of other advertisements" (p. 796) -- or, (they might have added), by the demand characteristics of the methodology employed. Subjects were shown specific advertisements and then quizzed about descriptive details of people who would "like this advertisement". While the authors (and Arbogast, 1986) interpret their findings to indicate that there may be subtle and invidious advertising effects, the data also support the

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conclusion that children have a rather cynical and guarded view of cigarette advertisements.

There is a special problem pertaining to the application of the "low involvement" explanation to consumer behavior in natural settings -- namely that it is not clear what kinds of evidence (if any) could possibly be adduced to disprove it. If the consumer does not recall or recognize any relevant ads, and disavows being influenced by advertising, critics of the ads can simply claim that the consumer was unaware of the ads' impact. Alternatively, if advertising copy is recollected, such memories may be taken as evidence of the ads' impact on consumer decisions. If advertising, in fact, has little or no influence on consumer decisions, we might reasonably expect that, at least some of the time, respondents' verbal reports would reflect the lack of influence. On these occasions, no involvement is logically indistinguishable from "low involvement", since both depend on the same sort of testimony (i.e., disavowals). A claim which does not permit empirical refutation is, by definition, a nonscientific proposition, and thus has no status as a scientific hypothesis.

The preceding is not intended as a rationale for dismissing out of hand the notion of low involvement learning. Jacoby (in press), and others have shown that various kinds of prior experiences can affect the subsequent perception and interpretation of later events. Furthermore, these effects are

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sometimes independent of recognition or recall of the prior activity. Petty, Cacioppo, and Schumann (1983) manipulated high and low involvement by informing students that they would be allowed to choose a particular brand of disposable razor (high involvement) or toothpaste (low involvement), and then measured the impact of a razor advertisement on the two groups. Certain aspects of the advertisement affected the low involvement group more strongly then the high involvement group. It is important to emphasize that in this study, and others like it, (e.g., Petty & Cacioppo, 1984) the respondents attended to and processed the information in the ads to a substantial and non-trivial degree. The difference between high and low involvement in most laboratory studies is a relative difference. These studies cannot be interpreted to indicate that a cursory, nonattentive perusal of an ad will nevertheless result in some subtle but lasting psychological effects. The degree of processing, even amongst the low involvement subjects was by no means superficial.

Proponents of an advertising ban often seem to imply that the mere co-existence in time and space of an advertisement and a potential consumer is all that is required to implicate "low involvement" influences. Such a view is reminiscent of a now-obsolete stimulus-response model of behavior which characterizes the individual as a static organism being passively and automatically influenced by outside forces.

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If the matter were that simple, the nation's houses and garages would be overflowing with products, the need for which would be bewilderingly unapparent to hapless consumers.

It is clear that asking respondents to provide assessments (retrospective or otherwise) of advertising's role in their smoking behavior yields the most tenuous sort of evidence regarding advertising's influence. In one of the few attempts to investigate potential media effects within a longitudinal design, Chassin et al. (1984) asked "How often do you see advertisements or read articles about smoking cigarettes?" This item was one of five devised to tap a category which the authors labeled 'prior direct experience'. This latter category was one of eight different factors used to measure the adolescents' "smoking environment". While some of the "smoking environment" variables (i.e. older siblings' and friends' smoking) were strongly predictive of transitions in smoking from nonsmoker to trier, the 'prior experience' variable was not among them.

CONCLUSION

While advertising does nothing to discourage smoking (c. f., Gerbner, 1990; Gitlin, 1990) the evidence that advertising is a causal influence on smoking onset is virtually nonexistent. Boddewyn (1986) claimed that advertising is being

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made into a scapegoat by the tobacco opponents. Other social scientists have also noted that advertising tends to act as a sort of lightning rod for critics of contemporary society who object to capitalism, industrial development, a 'materialistic ethos', crass consumerism, etc. According to Schudson (1984) advertising is not just a scapegoat for such attacks, it is a "sitting duck". Leiss et al. (1986) view most criticisms of advertising as "critiques of society masquerading as critiques of advertising" (p. 30).

Advocates of advertising bans often defend proposed restrictions in spite of the paucity of evidence adduced to support the claim that advertising is a causal factor in smoking initiation. Orlandi, Lieberman, and Schinke (1988), for example, concluded that "...children and adolescents of our society could conceivably be at great risk from exposure to ads *despite the fact that it can neither be proven scientifically nor persuasively argued legally*" (p. 92) (emphasis added).

Most children and teens will use drugs of one kind or another at some point in their lives. Predictors of drug involvement are similar to predictors of general behavior problems. Peer influences, family role models, academic difficulties, tolerance of deviance, and stressful life events are some of the major factors identified as influences on initial drug involvement. A predisposition to drug use may have its origin in very early childhood (Block, Block, & Keyes, 1988).

Tobacco use in North America, and in many other

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countries is a consumption pattern with deep social and cultural roots. At the moment, the available research evidence shows that smoking is a behavior which is influenced in complex ways by cultural, social, psychological and perhaps biological factors -- all of which interact in an intricate way with one another. Recent large-scale, multivariate studies conducted longitudinally on large samples have yielded the most informative data on smoking etiology. Advertising has not been shown to play a significant role in the process.

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